

**FINAL ENVIRONMENTAL IMPACT STATEMENT
BOTTOMFISH AND SEAMOUNT GROUND FISH FISHERIES
OF THE WESTERN PACIFIC REGION**

May 2005

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Abstract:

The Western Pacific Fishery Management Council (Council) has the responsibility to prepare a fishery management plan for any fishery requiring conservation and management in the U.S. Exclusive Economic Zones around the State of Hawai'i, the Territories of American Samoa and Guam, the Commonwealth of the Northern Mariana Islands and the various islands and atolls known as the U.S. Pacific remote island areas. In 1986, a fishery management plan for the bottomfish and seamount groundfish fisheries in the Western Pacific Region was prepared by the Council and approved by the Secretary of Commerce. The original plan has been amended six times, but until now there has not been an environmental impact statement to assess the issues and range of management options for these fisheries. This environmental impact statement presents an overall picture of the environmental effects of existing fishery activities as conducted under the fishery management plan. It also evaluates the impacts of a range of reasonable management alternatives in order to characterize their relative environmental effects and provide a clear basis for choice among options by the public, the Council and the National Marine Fisheries Service (NMFS). The analysis also assesses the biological, economic and social impacts that would result from alternative regulatory regimes for management of the bottomfish and seamount groundfish fisheries of the Western Pacific Region.

ABBREVIATIONS AND ACRONYMS

APA	Administrative Procedure Act		Refuge
ASG	American Samoa Government	HIR	Hawaiian Islands Reservation
BMUS	Bottomfish Management Unit	HMSRT	Hawaiian Monk Seal Recovery Team
	Species		
BO	Biological Opinion	ICB	Information Collection Budget
CFR	Code of Federal Regulations	IRFA	Initial Regulatory Flexibility Analysis
cm	Centimeters		
CNMI	Commonwealth of the Northern Mariana Islands	kg	Kilograms
		km	Kilometers
CPUE	Catch Per Unit Effort	lb	Pounds
CVM	Contingent Valuation Method	LOF	List of Fisheries
CZMA	Coastal Zone Management Act	LORAN	Long Range Aid to Navigation
DAWR	Division of Aquatic and Wildlife Resources, Government of Guam	m	Meters
		MBTA	Migratory Bird Treaty Act
DBEDT	Department of Business, Economic Development and Tourism, State of Hawai'i	MHI	Main Hawaiian Islands
		MMPA	Marine Mammal Protection Act
		MPA	Marine Protected Area
DFW	Division of Fish and Wildlife, CNMI	MSA	Magnuson-Stevens Fishery Conservation and Management Act
DMWR	Department of Marine and Wildlife Resources, American Samoa Government	MSST	Minimum Stock Size Threshold
		MSY	Maximum Sustainable Yield
		NAFTA	North American Free Trade Agreement
DOD	United States Department of Defense		
		NDSA	Naval Defense Sea Areas
EA	Environmental Assessment	NEPA	National Environmental Policy Act
EEZ	Exclusive Economic Zone	nm	Nautical Miles
EFH	Essential Fish Habitat	NMFS	National Marine Fisheries Service
EIS	Environmental Impact Statement	NMFS-PIFSC	NMFS, Pacific Islands Fisheries Science Center
EO	Executive Order		
ESA	Endangered Species Act	NOAA	National Oceanic and Atmospheric Administration
FCZ	Fishery Conservation Zone		
FFS	French Frigate Shoals	NOI	Notice of Intent
FLPMA	Federal Land Policy and Management Act	NWHI	Northwestern Hawaiian Islands
		NWR	National Wildlife Refuge
fm	Fathoms	NWRSAA	National Wildlife Refuge System Administration Act
FMP	Fishery Management Plan		
FOIA	Freedom of Information Act	OMB	Office of Management and Budget
FR	Federal Register	OSP	Optimum Sustainable Population
FRFA	Final Regulatory Flexibility Analysis	PBR	Potential Biological Removal
		PIRO	Pacific Islands Regional Office (NMFS)
ft	Feet		
FWCA	Fish and Wildlife Coordination Act	PRA	Paperwork Reduction Act
GATT	General Agreement on Tariffs and Trade	PRIA	Pacific Remote Island Area
		RFA	Regulatory Flexibility Act
GPS	Global Positioning System	RIN	Regulatory Identifier Number
HAPC	Habitat Areas of Particular Concern	RIR	Regulatory Impact Review
HDAR	Division of Aquatic Resources, State of Hawai'i	SBREFA	Small Business Regulatory Enforcement Fairness Act
HINWR	Hawaiian Islands National Wildlife	SEIS	Supplemental Environmental

	Impact Statement
SFA	Sustainable Fisheries Act
SPR	Spawning Potential Ratio
SWR	State Wildlife Refuge
TSLA	Territorial Submerged Lands Act
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VMS	Vessel Monitoring System
WpacFIN	Western Pacific Fisheries Information Network
WPRFMC	Western Pacific Regional Fishery Management Council

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SUMMARY

This summary reviews in brief the background, context, scope, and issues to be resolved in this environmental impact statement (EIS), the alternatives analyzed, the major conclusions reached, and the areas requiring further research and coordination.

Background and Overview

In 1986, the Western Pacific Fishery Management Council (Council) prepared, and the Secretary of Commerce approved, a Fishery Management Plan (FMP) for the bottomfish and seamount groundfish fisheries in the Western Pacific Region. Seeking to provide an updated view of emerging issues and management options for the bottomfish and seamount groundfish fisheries, on August 20, 1999 (64 FR 45514), the National Marine Fisheries Service (NMFS) and the Council announced its intention to prepare an EIS. Public scoping meetings were conducted at various locations that year. The environmental analysis presented here has evolved from that initial impetus, is regional in scope, has been refined based on public input and discussion at Council meetings as well as other public meetings. This EIS identifies and analyzes concerns associated with the bottomfish and seamount groundfish fisheries in the Western Pacific Region.

While the document addresses the broad range of issues associated with the entire fishery managed under the FMP, immediate environmental concerns are highlighted in the analysis. These include impacts on the Hawaiian monk seal (*Monachus schauinslandi*) and the Northwestern Hawaiian Islands (NWHI) coral reef ecosystem. With respect to NWHI coral reef ecosystem issues, significant developments include Executive Order (EO) 13178 of December 4, 2000 establishing the NWHI Coral Reef Ecosystem Reserve (Reserve). Subsequently, EO 13196 of January 18, 2001 revised portions of EO13178 and completed establishment of the Reserve.

The Notice of Availability of the draft EIS was published on October 17, 2003 (69 FR 59787), and the 45 day public comment period ended on December 1, 2003.

Relationships with Other Applicable Laws

As described in this analysis, the FMP management measures presently in place co-exist consistently with a number of restrictions imposed under other applicable legal authorities, including those establishing and imposing restrictions for the Reserve.

For example, FMP management measures presently in place relevant to the NWHI include gear prohibitions, a limited access system, and various notification and reporting requirements. Although there are no specific closed areas in the NWHI under the existing FMP and its implementing regulations (No Action Alternative), the Reserve does impose area and other restrictions. As the EOs establishing the Reserve overlaid new restrictions on existing FMP rules, regulated individuals must comply with the most restrictive applicable measures. Consequently, there is no conflict between the No-Action Alternative and the Reserve. This

analysis incorporates discussions of the Bottomfish FMP under the Magnuson-Stevens Act, as well as regulations imposed under such varied authorities as the National Wildlife Refuge Administration Act, Coast Guard regulations, and state law. The FMP does not require or encourage any activity in contravention of federal or state law. NOAA Fisheries and the NOAA Office of Law Enforcement recognize that fishing under the FMP must be conducted in accordance with not only the Bottomfish FMP but also other federal laws and Executive Orders such as the management regimes of the Reserve and the Hawaiian Islands and Midway Atoll National Wildlife Refuges.

Issues

With issuance of the Notice of Intent on August 20, 1999 to prepare an EIS for the management plan for the bottomfish and seamount groundfish fisheries in the Western Pacific Region (64 FR 45514), NOAA Fisheries formally initiated the process of determining the scope of issues to be addressed in this EIS. Issues identified during the public scoping process and considered in developing the alternatives described in Chapter 2 included the impacts of the bottomfish and seamount groundfish fisheries and management regime on the following elements of the human environment:

- Target Species
- Non-target Species
- Threatened and Endangered Species and Designated Critical Habitat
- Non-endangered Marine Mammals
- Essential Fish Habitat, Biodiversity and Ecosystems
- Commercial, Recreational and Charter Fishing Sectors
- Regional Economy
- Fishing Community
- Native Hawaiian Community
- Administration and Enforcement

These components of the existing environment are described in Chapter 3, and potential impacts to them arising from implementation of each of the management alternatives are described in Chapter 4.

Alternatives

The Fishery Management Plan for the Bottomfish and Seamount Groundfish Fisheries in the Western Pacific Region became effective by a final rule published on August 27, 1986 (51 FR 27413). The fishery management plan established a moratorium on the commercial harvest of seamount groundfish stocks at the Hancock Seamounts, the only exploitable seamount habitat in the management area. At its 123rd meeting (June 21-24, 2004) the Council approved a recommendation to continue the current moratorium for another six years (until August 31, 2010), and therefore there is no seamount groundfish fishery in the region. All of the alternatives assume this moratorium will remain in effect for the foreseeable future.

There are bottomfish fisheries in island areas throughout the region, but nearly all of these take place in nearshore waters managed by state or territorial agencies (i.e., generally waters 0-3 nautical miles from shore). Only in Hawai'i are there significant bottomfish fisheries in waters managed by federal agencies (i.e., generally waters 3-200 nautical miles from shore). The vast majority of Hawai'i's waters under federal jurisdiction are located in the Northwestern Hawaiian Islands, a largely uninhabited portion of the archipelago extending to the northeast of the Main Hawaiian Islands. The Northwestern Hawaiian Islands are home to the endangered Hawaiian monk seal, the threatened green turtle, numerous species of seabirds, as well as pristine coral reefs and unique terrestrial resources. Although the Northwestern Hawaiian Islands have been protected as National and State Wildlife Refuges, concern for the national and global degradation of coral reef ecosystems resulted in several Executive Orders designed to further protect the Nations's reefs and specifically the coral reefs around the Northwestern Hawaiian Islands. Executive Orders 13178 and 13196 established the NWHI Coral Reef Ecosystem Reserve to "ensure the comprehensive, strong, and lasting protection of the coral reef ecosystem and related marine resources and species (resources) of the Northwestern Hawaiian Islands."

In addition, in accordance with statutory guidance, the Secretary of Commerce has initiated the process to designate the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve as a National Marine Sanctuary. Because fishing activities have the potential to negatively impact both marine and terrestrial resources in this area, many of the scoping comments focused on the compatibility of bottomfish fishing with protection of these resources. The alternatives analyzed in this EIS, therefore, are designed to explore various potential management regimes for bottomfish fishing in the Northwestern Hawaiian Islands.

Six management alternatives were analyzed in this EIS. Alternative 1A, the No-Action alternative, is a continuation of the management measures of the existing FMP. Alternative 1B (the preferred alternative) is a continuation of the existing FMP, as well as several recent Council recommendations regarding: a) NWHI limited entry permit renewal requirements and transferability restrictions; b) procedures for issuance of new Mau Zone limited access permits; c) NWHI limited entry permits for members of Western Pacific Community Development Program; d) inclusion of the Commonwealth of the Northern Mariana Islands and U.S. Pacific Remote Island Areas in the Bottomfish and Seamount Groundfish FMP; and e) 50 mile area closure and 50 ft size limit for vessels targeting bottomfish within EEZ surrounding Guam

Alternative 2 would prohibit harvesting of bottomfish management unit species in the exclusive economic zone surrounding the Northwestern Hawaiian Islands. Harvesting of bottomfish in other island areas in the region under the existing fishery management plan would be unaffected. Alternative 3 would limit harvesting of bottomfish management unit species in the exclusive economic zone surrounding the Northwestern Hawaiian Islands to the lifetimes of fishermen with a recurring and recent history of participation in the fishery. Eligibility criteria would be based on participation in the fishery within a qualifying period. Again, harvesting of bottomfish in other island areas in the region under the fishery management plan would be unaffected. Alternative 4 would establish zones in federal waters surrounding the Northwestern Hawaiian Islands to reduce the risk of damage to resources and habitat, while allowing uses that are

compatible with resource and habitat protection. The zones defined for Alternative 4 include the General Use Zone (least restrictive), the Special Use Zone (for scientific research, and customary and traditional uses by Native Hawaiians), the Eco-tourism Zone (for current permitted uses in the Midway Atoll National Wildlife Refuge), and the Preservation Zone (most restrictive). Two variations of the zoning approach are analyzed in this EIS. In Alternative 4A, the Preservation Zone would include the federal waters around French Frigate Shoals (FFS) and Laysan Island. These are the two most important Hawaiian Monk Seal colonies, and FFS is the most important green turtle nesting site in Hawaii. The Preservation Zone proposed in Alternative 4B would also include the federal waters around Pearl and Hermes Reef, Lisianski Island and Kure Atoll, sites of the three next most important monk seal colonies.

Major Conclusions

This Final EIS concludes that the impacts of the current management plan for the bottomfish and seamount groundfish fisheries in the Western Pacific Region and a range of alternatives include both positive and negative impacts on the human environment. Chapter 4 presents a detailed discussion of the environmental impacts of the alternatives. Table 4-5 at the end of Chapter 4 presents in comparative form the environmental impacts of the alternatives, including the alternative of no action. The major conclusions with respect to the issues identified in scoping are summarized as follows:

- **Target Species** - Bottomfish species managed under the bottomfish and seamount groundfish fisheries management plan are currently not overfished. None of the alternatives would result in overfishing of these species. The various alternatives would result in effects ranging from a continuation of current target species harvest levels (Alternative 1A) to cessation of all harvest in the Northwestern Hawaiian Islands (Alternative 2).
- **Non-target Species** - Bottomfish fishing gear and operational practices are relatively selective for target species. Alternatives involving continued fishing in the Northwestern Hawaiian Islands (Alternatives 1A,B,and 4A,B) would result in low levels of non-target species mortality.
- **Threatened and Endangered Species** - Direct interactions between the Northwestern Hawaiian Islands bottomfish fishery and threatened and endangered species consist of rare hookings of Hawaiian monk seals. Indirect interactions through competition between the bottomfish fishery and the Hawaiian monk seal for seal prey species are minimal and are unlikely to affect the recovery of the monk seal population. None of the alternatives would increase the level of fishery interactions with endangered or threatened species. Alternatives that eliminate or reduce fishing in the Northwestern Hawaiian Islands (Alternatives 2, 3 and 4) would mitigate to varying degrees potential direct and indirect effects of the fishery on threatened and endangered species.
- **Non-endangered Marine Mammals** - Interactions between the bottomfish fishery and non-endangered marine mammals generally take the form of theft of bait or catch by dolphins. These interactions are unlikely to harm individuals or populations. None of the alternatives would increase the level of interactions. Alternatives that eliminate or reduce

fishing in the Northwestern Hawaiian Islands (Alternatives 2, 3 and 4) would mitigate to varying degrees the potential direct and indirect effects of the fishery on non-endangered marine mammals.

- **Essential Fish Habitat, Biodiversity and Ecosystems** - All alternatives involving continued fishing have the potential to affect habitat through anchor damage or vessel grounding. Bottomfish fishing in NWHI has been found not to adversely affect EFH, Biodiversity, or Ecosystems of the Western Pacific Region. Alternatives that eliminate or reduce fishing (Alternatives 2, 3 and 4) would mitigate to varying degrees the potential effects of the bottomfish fishery on bottom habitat and the Northwestern Hawaiian Islands coral reef ecosystem.
- **Commercial, Recreational and Charter Fishing Sectors** - Alternatives that eliminate or reduce bottomfish fishing effort in the Northwestern Hawaiian Islands (Alternatives 2, 3 and 4) would result in reduced income for fishery participants and ancillary businesses. Some portion of lost revenues may be recovered if fishermen switch to other fisheries. The displacement of fishing effort from the Northwestern Hawaiian Islands could increase competition in the Main Hawaiian Islands.
- **Regional Economy** - All of the alternatives would have a negligible effect on the Hawai'i economy. The maximum annual loss potentially resulting from closure of the Northwestern Hawaiian Islands bottomfish fishery is approximately \$1 million of output.
- **Fishing Community** - Alternatives involving continued fishing in the Northwestern Hawaiian Islands (Alternatives 1A,B and 4A,B) would promote social and economic stability within the community of fishermen in Hawai'i and help preserve elements of local fishing culture. Alternatives that eliminate bottomfish fishing in the Northwestern Hawaiian Islands (Alternatives 2 and, eventually, 3) could have a disproportionately high and adverse effect on minority populations, as minorities constitute a high proportion of bottomfish fishery participants and bottomfish consumers.
- **Native Hawaiian Community** - Participation of Native Hawaiians in the Northwestern Hawaiian Islands bottomfish fishery is currently low. Alternatives involving continued fishing (Alternatives 1A,B and 4A,B) have the potential to encourage participation of Native Hawaiians in the fishery. A Community Development Program that allocates twenty percent of the Mau Zone (southeastern portion of the Northwestern Hawaiian Islands) permits to Native Hawaiians is contained in Alt 1B. In addition, the zoning schemes of Alternative 4 would provide Native Hawaiians preferential access to certain areas for subsistence, cultural and religious purposes.
- **Administration and Enforcement** - Closure of the Northwestern Hawaiian Islands bottomfish fishery would reduce or eliminate most of the administrative costs associated with managing the bottomfish fishery in the region. Enforcement costs would be less affected because other threats to biological resources and habitats would remain. Zoning alternatives (Alternative 4) would increase administrative and enforcement costs.

Issues Requiring Further Research and Coordination

A major issue requiring more research is the possible impact of the Northwestern Hawaiian Islands bottomfish fishery on populations of the Hawaiian monk seal through competition for the

bottomfish resource. Monk seals are opportunistic feeders, consuming a wide variety of prey items. There does not appear to be any geographic correlation between areas heavily fished for bottomfish and declining monk seal populations. On the other hand, the relative importance of bottomfish in the monk seal diet is poorly understood. This EIS summarizes the status of knowledge regarding this question, but additional research is required to resolve the issue.

An issue which requires coordination involves the relationship between fisheries in the Northwestern Hawaiian Islands managed under the Bottomfish FMP and restrictions on fishing imposed by the Executive Orders creating the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve. The Reserve was established by EO 13178 of December 4, 2000 and includes certain conservation measures and Reserve Preservation Areas that are either completely closed to fishing or within which fishing is curtailed. As directed by the National Marine Sanctuaries Act Amendments of 2000, the Secretary of Commerce has initiated the process to designate the Reserve as a National Marine Sanctuary. As an EIS is being prepared for a proposed Sanctuary, this EIS does not duplicate that effort. However, this EIS does consider alternatives that would establish No-Take MPAs (1B) and a zoning regime similar to the Reserve Preservation Areas.

Another issue which requires further coordination is the conflicting jurisdictional claims of various state, territorial and federal agencies to waters around some of the islands in the region. As pointed out in Appendix G, points of contention exist between the State of Hawaii and the U.S. Fish and Wildlife Service regarding ownership of submerged lands surrounding the Northwestern Hawaiian Islands; between the Fish and Wildlife Service and the National Marine Fisheries Service regarding primary fishery management authority in federal waters within National Wildlife Refuge boundaries; between the State of Hawai'i and the federal government regarding the State's claim of archipelagic status; between the Commonwealth of the Northern Mariana Islands and the federal government regarding the Commonwealth's claim to a 12-mile territorial sea; and between the Government of Guam and the Fish and Wildlife Service regarding transferral of the Ritidian Unit from the Navy. For the purposes of this EIS, federal waters are assumed to extend from three to 200 nautical miles around all of the islands in the region except the Pacific Remote Island Areas and CNMI, where federal waters extend from the shoreline to 200 nautical miles.

Finally, unresolved claims of Native Hawaiians to the natural resources throughout the exclusive economic zone around the Hawaiian archipelago is another issue which requires further coordination. This EIS assumes that if there are available Northwestern Hawaiian Islands limited access bottomfish permits, not restricted to Native Hawaiians by the Community Development Program, anyone meeting the criteria specified in the fishery management plan amendments can apply for such a permit and that such permits will be granted according to the established point system.